

Claims

[c1] We claim as our invention:

1. A golf club comprising:

a shaft having a wall defining a hollow interior, the shaft having a tip end and a butt end;

a club head having a body with a heel end and a toe end, the body having a hosel extending outward, the hosel located at the heel end; and

an attachment assembly comprising

a shaft ring secured within the hollow interior of the tip end of the shaft, and

a screw placed within the hollow interior of the shaft, through a bore in the shaft ring and threadingly connected to the hosel of the club head.

[c2] 2. A golf club comprising:

a shaft having a wall defining a hollow interior, the shaft having a tip end and a butt end, the shaft composed of a metal material;

a club head having a body with a face, a crown, a sole, a heel end and a toe end, the body having a hosel extending outward from a surface of the crown a distance of 0.5 inch to 2.0 inches, the hosel located at the heel end

of the body; and
an attachment assembly comprising
a metal shaft ring welded to the interior surface of the
shaft, the metal shaft ring positioned from 1.5 inches to
0.25 inch from an opening at the tip end of the shaft,
and
a metal screw placed within the hollow interior of the
shaft, through a bore in the shaft ring and threadingly
connected to the hosel of the club head.

- [c3] 3. A golf club comprising:
a shaft having a wall defining a hollow interior, the shaft
having a tip end and a butt end;
a club head having a body with a heel end and a toe end,
the body having a hosel extending outward, the hosel
located at the heel end, the hosel having an open end
and a hollow interior, the hosel having a stud projecting
upward within the hollow interior toward the open end of
the hosel, the stud having a threaded bore;
an attachment assembly connecting the shaft to the club
head, the attachment assembly comprising
a shaft ring placed within the tip end of the shaft,
a locking sleeve for securing the shaft to the hosel, and
a screw placed within the hollow interior of the shaft,
through a bore in the shaft ring and threadingly con-
nected to the bore of the stud of the hosel of the club

head.

- [c4] 4. A golf club comprising:
a shaft having a wall defining a hollow interior, the shaft having a tip end and a butt end;
a club head having a body with a heel end and a toe end, the body having a hosel extending outward, the hosel located at the heel end, the hosel having an open end and a hollow interior;
a locking sleeve for securing the tip end of the shaft to the hosel, the locking sleeve engaging an exterior surface of the tip end of the shaft and an interior surface of the hosel, the locking sleeve having a body with a wall defining an aperture extending from a first opening to a second opening, the body having a first slot in the wall extending from the first opening to the second opening and the body having a second slot in the wall extending from the second opening along the wall and ending prior to the first opening, the body tapered in diameter from the first opening to the second opening.
- [c5] 5. The golf club according to claim 4 wherein the locking sleeve has a length from the first opening to the second opening ranging from 0.3 inch to 1.0 inch, and the body has a taper of three degrees.
- [c6] 6. The golf club according to claim 4 wherein the second

slot of the body of the locking sleeve has a length ranging from 0.2 inch to 0.75 inch.

- [c7] 7. A golf club comprising:
- a shaft having a wall defining a hollow interior, the shaft having a tip end and a butt end, the shaft having a notch at the tip end;
 - a club head having a body with a heel end and a toe end, the body having a hosel extending outward, the hosel located at the heel end, the hosel having a threaded bore accessible through an opening, the hosel having a protuberance extending outward from an exterior surface of the hosel, the protuberance mating with the notch of the shaft; and
 - an attachment assembly connecting the shaft to the club head, the attachment assembly comprising
 - a locking sleeve for securing the shaft to the hosel, the locking sleeve engaging an exterior surface of the tip end of the shaft and an exterior surface of the hosel, the locking sleeve having a body with a wall defining an aperture extending from a first opening to a second opening, the body having a slot in the wall extending from the first opening to the second opening, the body tapered in diameter from the first opening to the second opening, and
 - a screw placed within the hollow interior of the shaft and

threadingly connected to the threaded bore of the hosel of the club head.

[c8] 8. The golf club according to claim 7 further comprising a washer positioned around a portion of a threaded body of the screw.

[c9] 9. The golf club according to claim 7 further comprising a ferrule encircling a portion of an exterior surface of the tip end of the shaft.

[c10] 10. A golf club comprising:
a shaft having a wall defining a hollow interior, the shaft having a tip end and a butt end, the shaft having a notch at the tip end;
a club head having a body with a heel end and a toe end, the body having a hosel extending outward, the hosel located at the heel end, the hosel having a threaded bore accessible through an opening, the hosel having a protuberance extending outward from an exterior surface of the hosel, the protuberance mating with the notch of the shaft; and
an attachment assembly connecting the shaft to the club head, the attachment assembly comprising
a locking sleeve for securing the shaft to the hosel, the locking sleeve composed of a metal material, the locking sleeve engaging an exterior surface of the tip end of the

shaft and an exterior surface of the hosel, the locking sleeve having a body with a wall defining an aperture extending from a first opening to a second opening, the body having a slot in the wall extending from the first opening to the second opening, the body tapered in diameter from the first opening to the second opening, and

a screw placed within the hollow interior of the shaft and threadingly connected to the threaded bore of the hosel of the club head;

whereby the attachment assembly provides for an essentially adhesive free attachment of the shaft to the club head.